Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A protective packaging for protecting an at least one article, the protective packaging comprised of a shape memory foam (SMF) structure conforming to at least a portion of the at least one article for protecting the at least one article,

wherein the SMF structure is crosslinked, hydrophobic and has a glass transition temperature (T_g) ,

wherein the SMF structure is comprised of a structure of polyurethane foam being the reaction product of [[produced by]] reacting an <u>isocyanate</u> [[isocycate]] and a polyol, and

wherein the SMF structure has a shape memory characteristic such that when the SMF structure in an original shape is deformed or compressed above the T_g to produce a deformed or compressed shape and cooled in the compressed shape below the T_g , the SMF structure retains the compressed shape without the need of external forces and when the temperature is raised above the T_g , the SMF structure returns substantially to the original shape.

- 2. (canceled)
- 3. (previously presented) The protective packaging of claim 1, wherein the T_g is at or above about 21°C.
 - 4. (canceled)
- 5. (previously presented) The protective packaging of claim 1, wherein the polyurethane foam is prepared using a polyol selected from the group comprised of an aromatic polyester polyol, a polycarbonate polyol, a polyether polyol, and mixtures thereof.

S/N: 10/687,083

Reply to Office Action of June 15, 2006

6. (previously presented) The protective packaging of claim 1, wherein the polyol has an average functionality between about 2 and about 4.

- 7. (previously presented) The protective packaging of claim 1, wherein the isocyanate is an aromatic isocyanate having a functionality between about 2 and about 3.
- 8. (previously presented) The protective packaging of claim 1, wherein the polyurethane foam is produced by reacting the isocyanate with the polyol and a chain extender.
- 9. (previously presented) The protective packaging of claim 1, wherein the SMF structure has a substantially open cell structure.
- 10. (previously presented) The protective packaging of claim 1, wherein the T_{σ} is less than about 21°C.
- 11. (previously presented) The protective packaging of claim 1, wherein the SMF structure is compressible to less than about 50% of the original volume.
 - 12. (canceled)
- 13. (original) The protective packaging of claim 1, wherein the SMF structure is at least partially wrapped, coated, laminated, or encased in a film.
- 14. (previously presented) The protective packaging of claim 1, wherein the SMF structure is compressible to less than about 10% of the original volume.

15. (canceled)

- 16. (withdrawn) A method for producing a protective packaging for protecting an at least one article, the method comprising placing a shape memory foam (SMF) structure having a glass transition temperature (T_g) and an at least one article in a container, whereby the SMF conforms to at least a portion of the at least one article to protect the at least one article.
- 17. (withdrawn) The method of claim 16 wherein the SMF is at a temperature of about below or about above the $T_{\rm g}$.
- 18. (withdrawn) The method of claim 16 further comprising:
 deforming or compressing the SMF structure in an original shape to produce a
 compressed shape;

cooling the compressed shape to below the $T_{\rm g}$ to retain the compressed shape; and

raising the temperature of the compressed shape to above about the $T_{\rm g}$ to substantially regain the original shape,

whereby the original shape or the compressed shape conforms to at least a portion of the at least one article to protect the at least one article.

- 19. (withdrawn) The method of claim 18 wherein the raising of the temperature of the SMF is accomplished by a process selected from the group consisting of convection heating, conductive heating, microwave heating, or chemical reaction.
- 20. (withdrawn) The method of claim 18 wherein the cooling of the SMF is accomplished by a process selected from the group consisting of free convection, forced convection, refrigeration, conductive cooling, cooling baths, and liquid gas or nitrogen.
- 21. (withdrawn) The method of claim 18 further comprising providing a plurality of SMF structures and a plurality of articles.

Atty Dkt No. TRPI 0103 PUSP

S/N: 10/687,083

and

Reply to Office Action of June 15, 2006

- 22. (withdrawn) The method of claim 21 whereby the plurality of SMF structures are stackable for protecting the plurality of articles.
- 23. (withdrawn) A method for producing a protective packaging, the method comprising:

providing a shape memory foam (SMF) structure having a glass transition temperature (T_g) ;

providing a transportation or storage container;

deforming or compressing the SMF structure to produce a compressed shape;

placing he compressed shape in the transportation or storage container.

- 24. (withdrawn) The method of claim 23 wherein the compressed shape is substantially flat.
- 25. (withdrawn) The method of claim 23 further comprising providing a plurality of SMF structures suitable for deforming or compressing into deformed shapes for storing in the transportation or storage container.
- 26. (previously presented) The protective packaging of claim 1 wherein the structure is rigid below the T_g and elastic above the T_g .
- 27. (currently amended) A protective packaging for protecting an at least one article, the protection packaging comprised of a shaped memory foam (SMF) structure conforming to at least a portion of the at least one article for protecting the at least one article,

wherein the SMF structure is <u>the reaction product of</u> [[produced by]] reacting an isocyanate and an aromatic polyester polyol,

wherein the SMF structure is crosslinked and has a glass transition temperature, $T_{\rm g},\,{\rm and}$

wherein the SMF structure has a shape memory characteristic such that when the SMF structure in an original shape is deformed or compressed above the T_g to produce a deformed or compressed shape and cooled in the compressed shape below the T_g , the SMF structure retains the compressed shape without the need of external forces and when the temperature is raised above the T_g , the SMF structure returns substantially to the original shape.

- 28. (previously presented) The protective packaging of claim 27, wherein the T_g is at or above about 21°C.
- 29. (currently amended) A protective packaging for protecting an at least one article, the protection packaging comprised of a shaped memory foam (SMF) structure conforming to at least a portion of the at least one article for protecting the at least one article,

wherein the SMF structure is <u>the reaction product of</u> [[produced by]] reacting an isocyanate and a polycarbonate polyol,

wherein the SMF structure has a glass transition temperature, T_g , and wherein the SMF structure has a shape memory characteristic such that when the SMF structure in an original shape is deformed or compressed above the T_g to produce a deformed or compressed shape and cooled in the compressed shape below the T_g , the SMF structure retains the compressed shape without the need of external forces and when the temperature is raised above the T_g , the SMF structure returns substantially to the original shape.

- 30. (previously presented) The protective packaging of claim 29, wherein $T_{\rm g}$ is at or above about 21°C.
- 31. (new) The protective packaging of claim 1, wherein the polyurethane foam is essentially free of the isocyanate.